I-TECH
MEDICAL DIVISION

USER MANUAL

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Combined ultrasound therapy

Sonicstim

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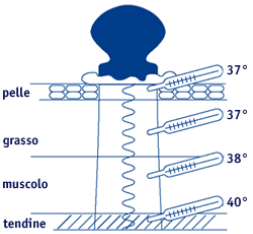
Summary

Summary 3
Introduction 4
Warnings 5
Contraindications 6
Side effects 7
Accessories and device description 7
Technical features 8
Labeling 8
Symbols description 10
Specifications 10
Purpose 10
Stored programs features 11
Kit contents 11
How to use SONICSTIM 12
Ultrasound instructions 13
Beauty treatments 14
Electrotherapy instructions (TENS) 17
Ultrasound + TENS instructions 21
Cleaning 24
Carriage and storage 24
Disposal 24
Electromagnetic interferences and device safety 25
Assistance 25
Spare parts 25
Warranty 26

Introduction

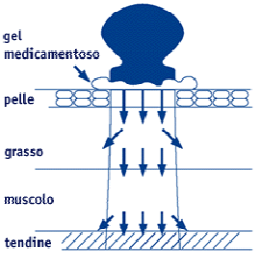
Sonicstim is a performance medical device able to combine ultrasound-therapy potentialities with electrotherapy good effects in a single innovative device.
The **sound** is given by a body vibration that expands in the air with a specific frequency and finally it reaches the ear. Sound frequency is measured in **Hertz (Hz)** and it is the number of oscillations (pressure variations) per second. The human ear can nominally hear sounds in a range from 20 Hz to 20000 Hz. Wavelength is the spatial period of the wave in a complete oscillation.
Ultrasounds are mechanical sound waves with frequencies higher than frequencies audible by the human ear.
Ultrasounds mechanical waves, generated by piezoelectric elements, are used in different industrial fields for years.
Thanks to the study of ultrasound waves in human application new diagnostic medical instrumentation has been built and they are widely used in gynecology, gastroenterology, hagiology and cardiology.
These instrumentations uses back-echo resulting from ultrasound beam that spreads in the human body and it is decelerated in different ways by anatomic structures. Each tissue has a specific acoustic impedance so ultrasound wave crossing through anatomic structures provokes different biological effects. **Thermal Effect** is the first effect that has a **pain-killer function** in orthopedics, sport medicine and in aesthetic fields for **cellulite** and **adipose tissue** treatment.

How do ultrasound waves generate heat?
Ultrasound waves loss energy when they cross through the tissues. The delivered energy is given to the crossed anatomic structure. Then energy to heat conversion increases significantly local temperature, in particular between tissues with different acoustic impedance (for example bone/soft tissues), and increases microcirculation. The bloodstream helps to dissipate the increased heat.



There are also **Not Thermal Effects** in ultrasound waves propagation.
The first are the **Mechanical Effects** caused by the ultrasound waves force on the cells that move toward low-pressure zones. As a consequence cells torsions and rotations with small vortexes happen in interstitial fluids (streaming).
These pressure variations can provoke **permeability alterations** of cells membranes (**biochemical and biological effects**). In case of adipose cells pressure variations promotes complex molecules liberation as fats that are released in circulatory system and subsequently they are eliminated through lymphatic system and micro-circulation.
Another aspect related to biochemical effect is the **Phonophoresis**, a technique that introduces drugs in tissues through the ultrasounds.

A non – thermal effect is the **Cavitation**.
In therapeutic field the ultrasounds are obtained in an artificial way. In fact some mineral crystals are able to dilate and condense when they are subjected to electric field action. Ultrasound irradiation creates some vibrations and a consequent intensive micro-massage on tissues in depth and as a consequence heat is generated (ultrasounds interaction with biological tissues has mechanical, thermal, chemical and cavitation effects).



Ultrasounds therapy is particularly indicated for locomotor apparatus **pathologies** in order to obtain an analgesic effect, in sciatic pain and neuritis, in periarticular calcifications, in Duplay's disease, in Dupuytren's disease, in hematomas and in heal tissues, in tendinitis, in muscle contractures. The ultrasounds can be used also in **cellulite** treatment by activating local circulation and by decreasing orange-peel effect. They promotes active substances penetration like essential oils, liposolubil vitamins (for example vitamin A and E) and water-soluble agents through skin by relaxing the tissues with great results in wrinkles treatment.

Ultrasounds result very efficacious in **anti-inflammatory process** that re-generate tissues in case of acne, in fats movement for tissue metabolism promotion, with positive effects also on vascularization and lymphatic drainage.
Moreover Sonicstim can be used in therapy with **TENS protocols**, for a wide set of pain problems like for example acute, chronic, muscular pains, post-operative pains and also for pain caused by pregnancy.
Finally Sonicstim can operate in combo mode **ultrasound + electrotherapy** in order to exploit the two actions in a single treatment.

Warnings

- The device doesn't produce or receive electromagnetic interferences from other devices. However it's recommended to keep a distance of at least 3 meters from televisions, monitor, mobile phones or other electronic devices.
- The device must not be used in the presence of patient monitoring equipment.
- Do not use the device with electrosurgical or shortwave or microwave therapy equipment.
- Use of the device is prohibited to persons known to be of unsound mind.
- Use of the device is prohibited in hyposensitive zones.
- Use of the device is prohibited to persons temporarily disabled unless assisted by qualified personnel (e.g. a doctor or therapist).
- Use of the device is prohibited in the presence of signs of deterioration of the device itself.
- Should any foreign matters penetrate the device contact the retailer or manufacturer immediately.

- If dropped, check that the housing is not cracked or damaged in any way; if so, contact the retailer or manufacturer.
- Should you notice any changes in the device's performance during treatment, interrupt the treatment immediately and consult the retailer or manufacturer (patients being treated in a centre must also be informed of the event).
- Use of the device is prohibited in combination with other medical devices.
- Use of the device is prohibited close to flammable substances or in environments with high concentrations of oxygen.
- Consult a doctor before using SONICSTIM with metallic osteosynthesis devices.
- It is forbidden to position the electrodes in such a way that the current crosses the heart area (e.g.

a black electrode on the chest and a red electrode on the shoulder blade);
however electrodes can be positioned along the muscular fascia of the heart area, as used for pectoral strengthening.

- Use of the device is prohibited with electrodes positioned on or close to injuries or cuts.
- The electrodes must not be positioned on the carotid sinuses (carotid) or genitals.
- The electrodes must not be positioned close to the eyes; make sure that the current delivered does not cross the eyeball (one electrode diametrically opposite to the other in relation to the eye); keep a distance of at least 3 cm. from the eyeball.
- When using the electrodes, follow the instructions given in this manual and on the package of the electrodes. Use single-patient electrodes, supplied exclusively by the manufacturer, and take care to avoid the exchange of electrodes between different users.
- Use electrodes supplied exclusively by the manufacturer; Sonicstim has been tested and guaranteed for use with the electrodes supplied.
- Insufficiently sized electrode sections can cause skin reactions or burns. Only use the round electrodes supplied by the manufacturer for facial applications.
- Do not use electrodes when damaged, even if they stick to the skin well.
- Electrodes must not be used when they no longer stick to the skin. Repeated use of the same electrodes can compromise the safety of the stimulation, in fact it can cause skin redness that can last for many hours after stimulation.
- Warning! During treatment with round and 41x41 mm. electrodes, current density may be in excess of 2 mA/cm² for each electrode. In these cases take special care regarding any skin redness.

Contraindications

Use of the device with TENS protocols or in combo mode ultrasound + electrotherapy is prohibited to persons with a pace-maker, cardiopathic subjects, epileptics, pregnant women, anxious people or people suffering from heart disease, phlebitis, thrombophlebitis or serious illnesses.
Use of the device with ultrasound therapy or in combo mode (ultrasound + electrotherapy) is prohibited to persons suffering from serious cardiovascular problems, tuberculosis, vertebral column diseases, malignant tumour,

neoplasia or with metallic prosthesis carriers (different medical prescriptions excepted), acute infections, vein thrombosis, serious osteoporosis, arteriopathies, inflammations and to persons younger than 12 years old.

In the event of injury, muscle stress or any other health problem use the device only under medical supervision.

Avoid to position the device in a way that ultrasound beam hits the eye area or in presence of glands, near uterus and abdomen, or in thrombophlebitis and inflammation area.

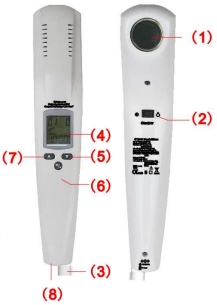
Side effects

No significant side effects are known. Some particularly sensitive people have reported skin redness in the area where the electrodes were positioned: the redness usually disappears a few minutes after the end of the treatment. Should the redness persist please consult a doctor.
In rare cases, stimulation carried out in the evening can cause some people to experience difficulty in falling asleep. However we suggest to avoid evening treatment. In particular with ultrasound therapy inflammation temporary increases can happen in treatment area, and so pain temporary increase, traumas due to more dosage, nervous system reactions, sanguine coagulation. If this occurs, suspend the treatment and consult a doctor.

Accessories and device description

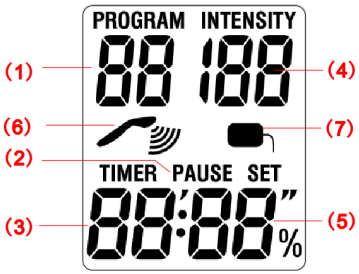
Device

(1) Ultrasound head
(2) On/Off
(3) Power supply connector
(4) Display
(5) Intensity decrease
(6) Programs selection/Stop
(7) Intensity increase
(8) Electrode connector



Display

(1) Program indicator
(2) Pause (not for all models)
(3) Timer
(4) Output intensity
(5) Ultrasound indicator
(6) Ultrasound head detector
(7) Electrode detector

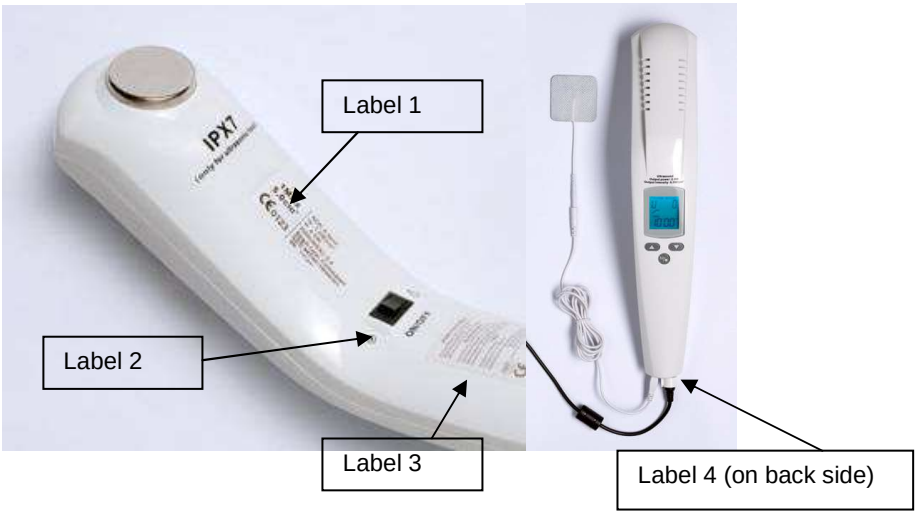


Technical features

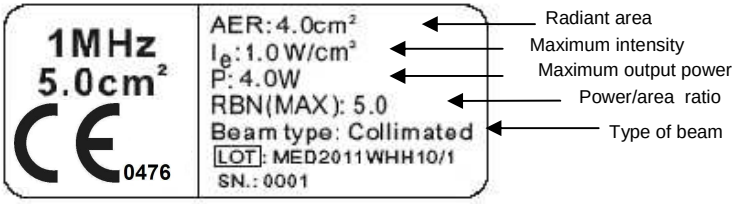
Power supply	100-240VAC, 50-60 Hz with dedicated power supply UE24WCP-150120SPA, output 15VDC 1.2 A
Maximum absorption	15 W during the treatment
Insulation class (CEI EN 60601-1)	II
Applied part (CEI EN 60601-1)	BF
Dimensions (mm)	358x64x97
Maximum output voltage	80Vpp su 1KOhm
Type of impulse	Compensated biphasic rectangular
Waveform frequency (Hz)	From 2 to 150
Impulse width (µs)	From 50 to 250
Ultrasound frequency	1MHz ±10%
Modulation waveform	20Hz ±10%
Ultrasound intensity levels	5 step
Ultrasound head dimensions	5 cm²
Radiant area	4 cm²
Type of ultrasound beam	collimated

ATTENTION. The device supplies a current higher than 10mA.

Labeling



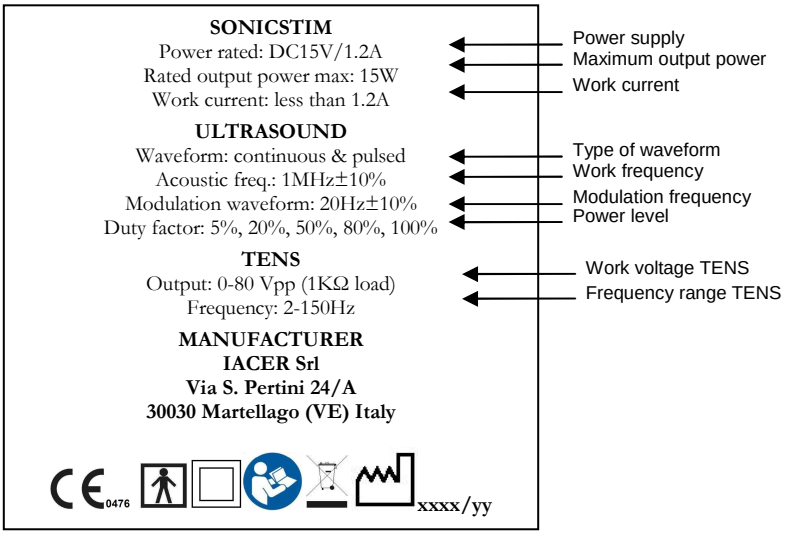
Label 1



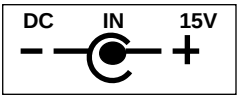
Label 2

ON/OFF

Label 3



Label 4



Symbols description

	Attention. Please read annex documents
	Product subject to WEEE regulations concerning separate waste collection of electronic equipment
	Class II equipment
	Applied part type BF
CE 0476	Product in compliance with Directive 93/42/EEC (MDD) (and following modifications Dir. 2007/47/EC)
	Manufacturing date (month/year)
S/N	Serial number
	Permitted temperatures
	Relative humidity

Specifications

Sonicstim has the following specifications:

- Class IIa equipment (Directive 93/42/CEE, Annexed IX, rule 9 and following modifications);
- Class II applied part type BF (Classif. EN 60601-1);
- Equipment not protected against liquid penetration;
- Equipment and accessories not subjected to sterilization;
- Use of the equipment is prohibited close to flammable substances or in environments with high concentrations of oxygen or nitrogen protoxide;
- Continuous operating mode equipment;
- Equipment not suited to be used in external.

Purpose

Clinical purpose:	Therapeutic and aesthetic
Use:	Clinic and domestic use

TENS programs are indicated for pain treatment like lumbalgy, sciatalgy, articular and rheumatic pains.
Ultrasound + TENS combo mode amplifies the effects of the two treatment when used separately.
Read and follow carefully user manual instructions for a secure and safe use of the device.

Stored programs features

PROGRAM	FREQUENCY	IMPULSE	ON/OFF (TENS)
Combined 1	35 Hz	200 µs	3 sec. / 3 sec.
Combined 2	70 Hz	50÷200 µs	Continuous, TENS with modulated impulse width
Combined 3	80 Hz	200 µs	Continuous, TENS conv.
Combined 4	100 Hz	175 µs	3 sec. / 3 sec.
Combined 5	2÷100 Hz	250 µs	Continuous, TENS with modulated frequency
Combined 6	2÷110 Hz	175 µs	Continuous, TENS with modulated frequency
Combined 7	150 Hz	50÷200 µs	Continuous, TENS with modulated impulse width and frequency
Ultrasound	**1 MHz**	**Continuous**	
Electrotherapy 1	35 Hz	200 µs	3 sec. / 3 sec.
Electrotherapy 2	70 Hz	50÷200 µs	Continuous, TENS with modulated impulse width
Electrotherapy 3	80 Hz	200 µs	Continuous, TENS conv.
Electrotherapy 4	100 Hz	175 µs	3 sec. / 3 sec.
Electrotherapy 5	2÷100 Hz	250 µs	Continuous, TENS with modulated frequency
Electrotherapy 6	2÷110 Hz	175 µs	Continuous, TENS with modulated frequency
Electrotherapy 7	150 Hz	50÷200 µs	Continuous, TENS with modulated impulse width and frequency

Read specific chapters concerning the different treatments (ultrasound therapy, electrotherapy, combo mode) in order to get all information about therapy details, treatable pathologies and programs use.

Kit contents

- Portable combo device
- Medical power supply
- Ultrasound gel
- Single plug cable for electrotherapy
- Double plug cable for electrotherapy
- Electrodes with connection female plug
- User manual and electrodes positions manual
- Carriage bag

How to use SONICSTIM

Before and after using Sonicstim clean and disinfect ultrasound head with a disinfectant solution.
The device can work in three different ways: ultrasound (program U), TENS electrotherapy (programs E1-E7), combined ultrasound+electrotherapy (programs C1-C7).

Preliminary instructions

Connect the power supply to device plug.

If you use the device for TENS treatment connect the impulse transmission cables to the relative electrode connector (8).

If you use the device in combo mode ultrasound +electrotherapy connect the impulse transmission cable to the relative electrode connector (8).

If you use the device only for ultrasound treatment no electrodes connection is demanded.

Turn Sonicstim ON: the device switches on displaying the combined program C1.
Select the desired mode running programs list: U (ultrasound), C1-C7 (combined), E1-E7 (electrotherapy) using the buttons M/ ■ .

Follow the instructions in according to desired working mode (ultrasound, electrotherapy, combined).

Ultrasound instructions

Ultrasound therapy is particularly indicated for analgesic treatment and for contracted muscle relaxation, and in neuritis, sciatalgy, articular calcification, tendinitis, hematomas and contractures treatments.
Ultrasound therapy is also indicated for treatments in aesthetic field like for example in cellulite treatment, tissues regeneration, vascularization and lymphatic drainage.

Analgesic and decontracting treatments

In the imagines pain zones are illustrated by the **red color** and trigger points by the **blue color.**
Make reference to the figures in the attached table (PAIN ZONES and TRIGGER POINTS)in order to get details and suggestions about treatable pathologies.

Pain zones could be different from trigger points as it's illustrated in the figures.
First we recommend a daily treatment of 10 minutes for a period of 21 days, then we suggest a therapy interruption of 7 days and eventually you can start a new therapy cycle of 21 days

(1) Put a good quantity of ultrasound gel on the area to be treated. The gel is an important factor in order to guarantee a right combination between the treated zone and the ultrasound head so finally the therapy efficacy.
(2) Select the program U running programs list using the button M/ ■
(3) Increase ultrasound beam intensity using the button ▲. Therapy time countdown will start.

ATTENTION: in ultrasound treatment we recommend an adjusted intensity equal to 3. If you use intensities higher than 3 pay attention to keep ultrasound head in continuous movement.

ATTENTION: the device is equipped with a right combination detector between the ultrasound head and patient skin in order to guarantee patient safety. In case of wrong combination display has a violet backlight and ultrasound head icon starts flashing.

ATTENTION: it's important to keep in continuous movement ultrasound head on the treated area during the therapy with slow and circular or vertical (at least of 7-8 cm) movements. It's forbidden to keep ultrasound head fixed in a point during the treatment.

Beauty treatments

Cavitation

Cavitation is a physical fenomena that consists in the formation of vapor zones within a fluid. The fluid dissolved gas forms vapor bubbles or cavities due to ultrasound pressure decrease. Then vapor bubbles collapses because of movement in high pressure zones. The delivered energy produces different reactions on the surrounding areas.

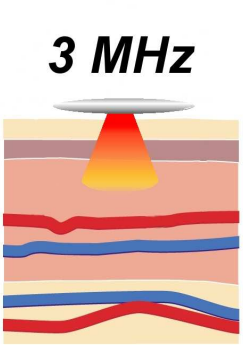
Cavitation applications

Acoustic waves with frequency from 1 to 16 Mhz are used in medical field both for diagnosis and dermatoligic purposes. In fact these waves produces a thermal and analgesic effect and also a cavitation effect than can be used for **kidney stones** removal (litotrissia). Microbubbles collapse destroys kidney stones and it pulverizes solid substances within the kidney. Moreover cavitation effect is used in **aesthetic medecine** in order to decrease or eliminate adiposities. This technique is called non-surgical liposuction.
Cellulite is a deasese affecting the hypoderma that is a tissue under the dermal tissue and with an adipose nature. The consequence is an increase of adipose cells volume, like so hydric retention and liquids stasis in the inter-cell spaces.
There are three kinds of cellulite desease:

- **Compact**: this type of cellulite causes an oedema that is a liquids concentration; it appears in adipose tissue in particular near the ankles, calfs, thighs and it's present also in persons with good health conditions and with tonic muscles.
- **Flaccid**: is found in middle-age persons with hypo-tonic muscles.
- **Edematous**: is the progression of compact cellulite and it appears in presence of circulatory pathologies.

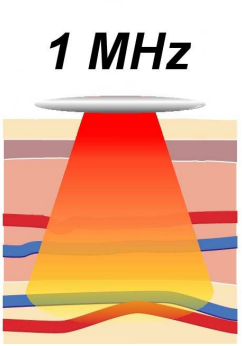
Cavitation and aesthetic

Aesthetic cavitation consists in low frequency (0,03-3 MHz) ultrasound waves application that generates vapor bubbles in adipose tissue. These bubbles rapidly implode delivering energy that breaks up adipose cell and transform localised fat in a form which can be easily eliminated by lymphatic system and urinary way and with the help of a right drainage.
In aesthetic field 3 MHz ultrasounds has been used for years. Recently new studies induce ultrasound devices manufacturers to decrease working frequencies since ultrasounds ability to penetrate in depth in tissues is in inverse proportion to the ultrasound beam frequency. Nowadays the marketing offers 3MHz,1MHz till 0,03MHz ultrasound devices.



3MHz beam, characteristically more collimated but with lower tissue penetration.

1MHz beam, characteristically less collimated but with higher tissue penetration.



Application

Ultrasound head has to work in a uniform way on the area to be treated in order to avoid adipose anti-aesthetic and solid masses on non-treated areas.
Ultrasound head has to be in continuous movement in order to avoid treated zone overheating.
Ultrasound head has to be in continuous contact with the treated zone through a conductive gel, better if it's a gel with active ingredient.
We always recommend to treat a maximum area of 20cmX20cm size for 10 minutes, afterwards treat an adjacent area in order to treat finally all interested area.
This kind of treatment can be done with hours or days intervals or consecutively between the different areas.
Cream or gel use with active ingredients promotes ultrasound action. In fact ultrasound action promotes substances and active principles penetration into the tissues (**Phonophoresis**). **As a consequence ultrasound effect will be amplified if you use a specific active principle.**
Cavitation purpose is to transform adipose cells (fat) in a form which can be easily eliminated by lymphatic system. After a cavitation treatment we heartily recommend to do optionally:

- a walk at a fast pace for 30/40 minutes
- a pressotherapy treatment for 20/30 minutes
- swimming for 20/30 minutes

in order to promote "liquid" fat elimination.
Thanks to their effects (thermal, chimical, mechanical, cavitation) ultrasounds are indicated for:

- local sanguine circulation stimulation
- skin trophism improvement
- cell oxygenation.

Treatments

Ultrasound treatments for drainage/cellulite problems concern the following body areas:

- Thigh
- Calfs
- Hips (pads)
- Ankles
- Knees
- Gluteus
- Arms
- Abdomen (with 4 as maximum ultrasound intensity)

Cellulite and drainage: each treatment has to be done on a maximum area 20x20 cm size for 10 minutes. Consequently a thigh complete treatment will depend on thigh dimension and it will last from 20 to 30 minutes.

PROGRAMS

ZONE	PRG	Intensity	N° appl.	Frequency
Thighs drainage	U	4	20	daily
Thighs compact cellulite	U	4	30	daily
Thighs flaccid cellulite	U	4	40	daily
Thighs edematous cellulite	U	5	40	daily
Calfs drainage	U	4	20	daily
Calfs compact cellulite	U	4	25	daily
Calfs flaccid cellulite	U	4	30	daily
Calfs edematous cellulite	U	5	30	daily
Pads drainage	U	4	20	daily
Pads compact cellulite	U	4	25	daily
Pads flaccid cellulite	U	4	30	daily
Pads edematous cellulite	U	5	30	daily
Ankles and knees drainage	U	3	15	daily
Ankles and knees compact cellulite	U	3	20	daily
Ankles and knees flaccid cellulite	U	3	25	daily
Ankles and knees edematous cellulite	U	3	30	daily
Gluteus drainage	U	4	20	daily
Gluteus compact cellulite	U	4	25	daily
Gluteus flaccid cellulite	U	4	30	daily
Gluteus edematous cellulite	U	5	30	daily
Arms drainage	U	3	15	daily
Arms compact cellulite	U	3	20	daily
Arms flaccid cellulite	U	3	20	daily
Arms edematous cellulite	U	3	20	daily
Abdomen drainage	U	3	20	daily
Abdomen compact cellulite	U	3	25	daily
Abdomen flaccid cellulite	U	3	30	daily
Abdomen edematous cellulite	U	4	30	daily
Acne / Pimples	U	2	10/20	daily

ATTENTION:

- Keep always in movement ultrasound head
- Use a good dose of gel in order to guarantee the contact
- Treat a maximum area 20x20cm size during a therapy session
- If the area is bigger than 20x20 cm size do more treatments in succession on smaller zones
- Treat in a uniforme way the interested area

CONTRAINDICATIONS:

- Phlogosis
- Neoplasia
- Pregnancy
- Metal materials near the treated area
- Heart area (directly on the chest)
- Persons with a pace maker
- Arteriopathies
- Serious osteoporosis
- Thrombophlebitis
- Near genital and eyes area
- Tumors
- Growing bones (younger than 12 years old)
- Vertebral column (it's forbidden to treat area on spinal cord)

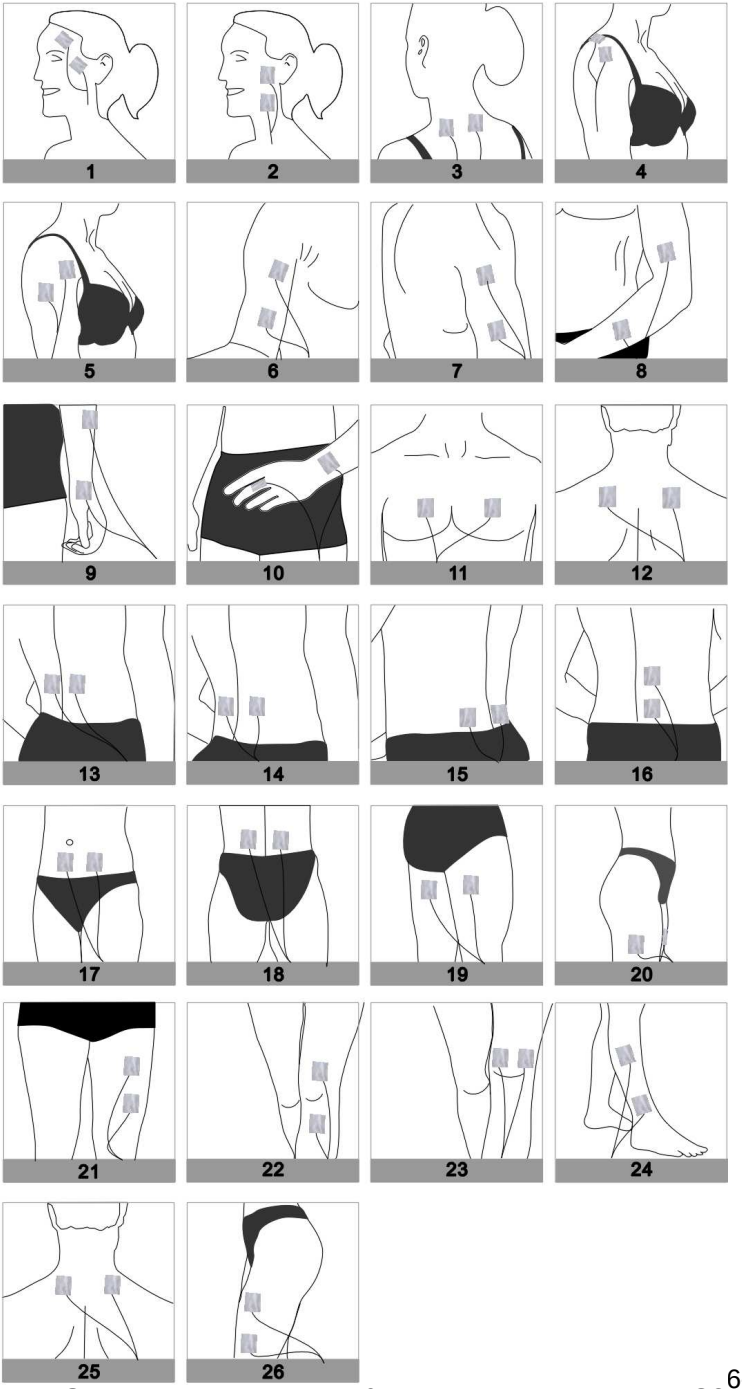
Electrotherapy instructions (TENS)

With the cable disconnected from Sonicstim, connect the electrostimulation cable jacks to the electrodes and position the electrodes in the treated area, select the desired electrotherapy programs (E1-E7) running the programs menu with the button M/ ■ .
Make reference to the following table for electrodes positions and also for therapy program choice.

Pathology	TENS program	Intensity	Electrode positions
Generic pain	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Pain area
Arthrosis/ Arthritis pain	E3 o E7	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Pain area
Headache	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments	Fig. 1

		(3ON+3OFF)	
Face pain	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 2
Mononeuropathy	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 11
Muscle pain	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 6, 7, 9, 24
Cervical Rizopathy	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 5
Neuralgia	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 15
Sciatica	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 19
Knee pain	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 23
Trapezius pain	E2, E5, E6 e E7	Adjusted until a tingling feeling is produced in the treated area	Fig. 12, 25
Lumbalgia	E2 e E7	Adjusted until a tingling feeling is produced in the treated area.	Fig. 13, 14
Thigh pain	E2, E5, E6 e E7	Adjusted until a tingling feeling is produced in the treated area	Fig. 21, 26
Neck pain	E7	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 3
Shoulder pain	E1 e E4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	Fig. 4
Elbow pain	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 8
Rheumatic pains	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 10

Intercostal pains	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 16
Menstrual pains	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 17
Phantom limb pain	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 18
Hip pain	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 20
Knee osteoarthritis pain	E3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	Fig. 22, 23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(1) Increase stimulation intensity using the button ▲ until a tingling feeling is produced in the treated area. Screen displays intensity value and the indication of right electrode connection to the skin. In the normal state display has a green backlight.

ATTENTION: in case of wrong connection or weak adherence electrode icon starts flashing when intensity value is higher than 10 and display has a violet backlight.

Ultrasound + TENS instructions

Connect the electrostimulation cable jack to the electrode, then connect electrode and position it in the area to be treated. Select the desired combined program ultrasound+electrotherapy (C1-C7) running programs menu with the button M/ ■.
Make reference to the following table in order to select more efficacious treatment.
The figures in the attached table show the right electrode and ultrasound head position (trigger points): trigger points referred to ultrasound are indicated by the **blue color** while electrode position is indicated by the **grey color**.

Pathology	Prg combo	TENS intensity	Ultras. intensity	Electrodes position
Headache	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	5-20%	Fig. 1
Face pain	C3 or C7	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	5-20%	Fig. 2
Mononeuropathy	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	20-50%	Fig. 11
Muscle pains	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	50-80%	Fig. 6, 7, 9, 24
Cervical Rizopathy	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	50%	Fig. 5
Neuralgia	C1 and C4	Adjusted until a tingling feeling is produced in the	50-80%	Fig. 15

		treated area alternated with OFF moments (3ON+3OFF)		
Sciatica	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	50-80%	Fig. 19
Knee pain	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	50-80%	Fig. 23
Trapezius pain	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	50-80%	Fig. 12, 25
Lumbalgy	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	50-80%	Fig. 13, 14
Thigh pain	C2, C5, C6 and C7	Adjusted until a tingling feeling is produced in the treated area	50-80%	Fig. 21, 26
Neck pain	C2 and C7	Adjusted until a tingling feeling is produced in the treated area	20-50%	Fig. 3
Shoulder pain	C2, C5, C6 and C7	Adjusted until a tingling feeling is produced in the treated area	20-50%	Fig. 4
Elbow pain	C7	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	20-50%	Fig. 8
Rheumatic pains	C1 and C4	Adjusted until a tingling feeling is produced in the treated area alternated with OFF moments (3ON+3OFF)	20-50%	Fig. 10
Intercostal pains	C3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	50-80%	Fig. 16
Menstrual pains	C3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	20%	Fig. 17
Phantom limb pain	C3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	20-50%	Fig. 18
Hip pain	C3	Adjusted until a tingling	50-80%	Fig. 20

		feeling is produced without contracting the surrounding muscles		
Knee osteoarthritis pain	C3	Adjusted until a tingling feeling is produced without contracting the surrounding muscles	50%	Fig. 22, 23

(1) Put gel on the area to be treated with ultrasound head.
(2) Before increasing TENS intensity lean ultrasound head on skin.
(3) Increase TENS stimulation intensity using button ▲. The screen displays stimulation intensity value, right connection indication of electrode to the skin and the right ultrasound head combination. Display has a green backlight if the device is working properly.
(4) It's possible to adjust ultrasound beam intensity while the device is working (duty cycle) at 5%, 20%, 50%, 80% and 100%.
(5) Press the button MODE M/ ■ keeping it pressed and immediately press the button ▼. Keeping both buttons pressed at least for 3 seconds.
(6) Screen displays middle intensity adjusted at 50%. Stop keeping pressed the buttons MODE M/ ■ and ▼.
Adjust desired intensity using the buttons ▲▼ and confirm with the button MODE M/ ■
Screen displays TENS stimulation intensity value and remaining time to the therapy end.

ATTENTION: we recommend to adjust ultrasound intensity at 50% or as it's indicated in the above-mentioned programs table.

ATTENTION: device is equipped with a right combination detector between ultrasound head and patient skin in order to guarantee patient safety. In case of wrong combination or bad contact display has a violet backlight and ultrasound head icon starts flashing.

ATTENTION: in case of wrong connection or bad adherence between electrode and skin, electrode icon starts flashing when intensity value is higher than 10 and display has a violet backlight.

ATTENTION: it's important to keep in continuous movement ultrasound head on the treated area during the therapy with slow and circular or vertical (at least of 7-8 cm) movements. It's forbidden to keep ultrasound head fixed in a point during the treatment.

Cleaning

Clean the equipment from the dust using a dry soft cloth.
Resistant stains can be removed using a sponge soaked in solution of water and alcohol.

Carriage and storage

Carriage precautions

SONICSTIM is a portable device, so it does not need any particular carriage precautions.
However we recommend to put away SONICSTIM and its accessories in their own bag after every treatment.

Storage precautions

Sonicstim is protected till following environmental conditions:

Outside of the packaging

temperature	from +5 to + 40 °C
humidity	from 30 to 75%
pressure	from 700 to 1060 hPa

Inside of the packaging

temperature	from –10 to +50 °C
humidity	from 10 to 90%
pressure	from 700 to 1060 hPa

Disposal

The equipment is subjected to WEEE regulations (see the symbol on the label) concerning separate waste collection: when disposing this product, please use the designed areas for disposing electronic waste or contact the manufacturer.

Electromagnetic interferences and device safety

The device doesn't produce and doesn't receive interferences from other equipments. However, it's opportune to use the instrument keeping it at least at 3 meters from televisions, monitors, cellular telephones or any other electronic equipment.
The device is manufactured in compliance with EC 60601-1-2:2001/DIN VDE 0750 Part 1-2.
The device is also in compliance with IEC/EN 60601-1, IEC/EN 60601-2-5 and IEC/EN 60601-2-10.

Assistance

Every intervention on device must be performed by manufacturer or national distributor. For any assistance intervention contact:

I.A.C.E.R. S.r.l.
Via S. Pertini, 24/a • 30030 Martellago (VE) - Italy
Tel. +39 041 5401356 • Fax +39 041 5402684

You can get any technical documentation on spare parts but only prior business authorization.

Spare parts

Contact the manufacturer or the national distributor for original spare parts at following address:

I.A.C.E.R. S.r.l.
Via S. Pertini, 24/a • 30030 Martellago (VE) - Italy
Tel. +39 041 5401356 • Fax +39 041 5402684

To preserve product warranty, functionality and product safety we recommend to use only original spare parts.

Warranty

Make reference to the national laws for any warranty conditions by contacting the national distributor (or directly the manufacturer IACER).

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